



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,549	12/27/2001	Pavel G. Polynkin	2102393-991130	7501

7590

05/04/2005

David L. Alberti  
Gray Cary Ware & Freidenrich  
1755 Embarcadero Road  
Palo Alto, CA 94303

EXAMINER
----------

STAHL, MICHAEL J

ART UNIT	PAPER NUMBER
----------	--------------

2874

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/033,549

Applicant(s)

POLYNKIN ET AL.

Examiner

Mike Stahl

Art Unit

2874



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29,31,32,35 and 36 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-29,31,32,35 and 36 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Art Unit: 2874

This Office action is in response to applicant's reply filed February 10 2005. Claims 1-29, 31-32, and 35-36 are pending. No claims were amended. The new declaration submitted August 26 2004 is acknowledged. The previous objection to the declaration is withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 32, and 35 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Stafford (US 5504575) in view of Tobias (US 5483335).

Claims 18-29, 31 and 36 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Stafford in view of Tobias, further in view of Braun et al. (US 6177992).

Claims 12-17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Stafford in view of Tobias, further in view of Saunderson (US 3090278).

Full statements of these rejections may be found in the Office action mailed August 5 2004.

***Response to Arguments***

Applicant's remarks submitted with the February 10 2005 reply are not persuasive as follows:

Art Unit: 2874

- Applicant argued again that Stafford teaches toward a single detector with a linear response, and teaches away from using an array detector such as that used in Tobias. The examiner again asserts that although a single detector may be the preferred arrangement, there is no discussion in Stafford which specifically excludes the use of an array of detectors. Teaching toward a preferred embodiment is not considered equivalent to teaching away from alternative embodiments, in the examiner's view. Stafford does not actually state that an array detector would be disadvantageous or ineffective.
- Applicant argued again that Tobias teaches away from using array detectors to [perform] both multiplexed and concurrent detection. Tobias is not the primary reference being relied upon in the obviousness rejection. The examiner again asserts that Tobias is being relied upon for its teachings of the advantages of array detectors relative to single detectors. These advantages are not limited to the Tobias invention and are known generally to persons of ordinary skill in the art. The manner in which Tobias happens to specifically use or arrange an array of detectors, in that specific disclosed invention, is not relevant here.
- Applicant argued that the proposed inclusion of a detector array with the Stafford device would not automatically provide a system that could perform both concurrent and sequential detection. This is not persuasive since the Stafford device already achieves concurrent and sequential detection with only a single detector. Addition of more detectors would not remove this functionality, even if only the original detector was active. Applicant's argument that there is no objective evidence that the control components of Stafford could be

Art Unit: 2874

modified to handle a system having plural detectors is not persuasive. A person of ordinary skill could be expected to modify the control components to handle the outputs of the additional detectors. It is noted here that Stafford refers to using a processor 34 (which may be a microprocessor) to handle the signal from the detector 28 (col. 3 lns. 23-34), and teaches that this same processor also controls the plural cells of the spatial light modulator 20 (see e.g. fig. 1). Microprocessor technology is well developed. It is inconceivable that a skilled person would not have been able to construct and/or purchase a microprocessor which could handle signals from more than one detector. Moreover, processors which handle signals from plural detectors are already known, as demonstrated (for example) by the previously cited Chen et al. reference (US 6249346).

- Applicant's comment (p. 4, second and third paragraphs) that no issue was taken with Stafford's ability to perform sequential and concurrent detection is misplaced. The comment was made in response to the second sentence of the second paragraph on p. 9 of the August 5 action. The examiner was not attempting to make a point with that sentence, but rather was merely transitioning from the first paragraph to the second paragraph by contrasting Stafford with Solgaard. No further analysis or pondering of that particular sentence is necessary.
- Applicant argued that the examiner's assertion that "any" deviation from a linear response can be compensated by the software is a substantial overstatement of the teachings of Stafford and is not supported by the record. Support may be found at col. 7 lns. 1-3 of Stafford. Applicant opted to scrutinize this statement by pointing out that Stafford only

Art Unit: 2874

refers to compensating for “known” non-linear responses. The examiner concedes that “any” was a sub-optimal wording choice in this instance. However, the examiner does not agree with applicant’s apparent contention that the software of Stafford could not have been readily applied to compensating an array of detectors. It would be expected that all the detectors in the proposed array are of the same type and have the same nonlinearity in their responses. Therefore the same compensation required for a single detector would be required for each detector in the corresponding array. Even assuming for argumentative purposes that each detector had a different nonlinearity, the necessary compensation for each detector in the array would be determined in the same way as it would be for only one detector. This would not be a technological obstacle for those of ordinary skill in the art.

- Applicant also argued against the statement in the last action that an array of detectors provides additional flexibility in terms of tailoring the response of individual detectors to improve the linearity of the array as a whole to beneficially reduce the dependence on post-compensation software. Reference is made to the last two sentences of the immediately preceding paragraph.

Ultimately, the only difference between Stafford and independent claims 1 and 32 as presently written is that Stafford uses a single detector instead of an array of detectors. As asserted in the current rejection, given the well-known advantages of array detectors for spectroscopy, this difference is not considered to be a patentable one.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

References cited on the attached PTO-892 form were encountered during an update of the search and are considered relevant to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Stahl at 571-272-2360. Inquiries of a general or clerical nature (e.g., a request for a missing form or paper, etc.) should be directed to the technical support staff supervisor at 571-272-1626. Official communications which are eligible for submission by facsimile and which pertain to this application may be faxed to 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be


Art Unit: 2874

obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJS

Mike Stahl  
Patent Examiner  
Art Unit 2874

April 29, 2005



Rodney Bovernick  
Supervisory Patent Examiner  
Technology Center 2800